
Title VI Compliance Monitoring Report

July 2020

Title VI of the Civil Rights Act of 1964

(42 U.S.C. §§ 2000d, et seq.)

&

FTA Circular 4702.1B, dated October 1, 2012

TITLE VI REQUIREMENTS AND GUIDELINES FOR FEDERAL TRANSIT
ADMINISTRATION RECIPIENTS

Montgomery County Department of Transportation

Division of Transit Services

Rockville, Maryland



Accessible Formats

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Montgomery County Department of Transportation
Division of Transit Services
101 Monroe Street, 5th Floor
Rockville, Maryland 20850

240-777-5800 * <http://www.montgomerycountymd.gov/dot-transit>

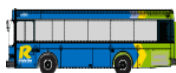


Table of Contents

1. Overview and Recommendations	1
2. Montgomery County Service Standards	2
2.1. FTA Service Standard Requirements	2
2.2. Ride On Service Standards.....	2
2.3. Ride On Service Policies.....	3
3. Monitoring Methods	5
3.1. Minority Population by Bus Route.....	5
3.2. Vehicle Load Factor Monitoring Method	7
3.3. Route Headways Monitoring Method	7
3.4. On-Time Performance Monitoring Method	7
3.5. Service Accessibility Monitoring Method	7
3.6. Vehicle Assignment Monitoring Method.....	7
3.7. Distribution of Transit Amenities Monitoring Method.....	7
4. Monitoring Results	8
4.1. Vehicle Load Factor Monitoring Results	8
4.2. Route Headways Monitoring Results	8
4.3. On-Time Performance Monitoring Results.....	9
4.4. Service Accessibility Monitoring Results	9
4.5. Vehicle Assignment Monitoring Results	10
4.6. Distribution of Transit Amenities Monitoring Results	10
4.7. Load Factor Detailed Results	12
4.8. Route Headways Detailed Results	14
4.9. On-Time Performance Detailed Results	16
4.10. Service Accessibility Detailed Results	17
4.11. Vehicle Assignment Detailed Results.....	20
4.12. Distribution of Transit Amenities	22

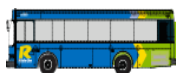


1. Overview and Recommendations

Following the guidelines set forth by FTA Circular 4702.1B, the Montgomery County Department of Transportation (MCDOT) monitors the performance of the transit system relative to system-wide service standards and service policies on a tri-annual basis. These monitoring activities are used to compare the level of service provided to predominantly minority areas with the level of service provided to predominantly non-minority areas to ensure that the result of policies and decision-making is equitable.

The monitoring methodology groups the routes into four quartiles with quartile 1 having the highest minority population and quartile 4 having the lowest minority population. For the purpose of this monitoring report, routes grouped in quartiles 1 and 2 are considered the minority services.

This Compliance Monitoring Report has not identified any of disparity which requires additional review.



2. Montgomery County Service Standards

2.1. *FTA Service Standard Requirements*

MCDOT receives FTA funding to provide service in Montgomery County, Maryland as a sub-recipient to the Maryland Transit Administration. As defined under 49 U.S.C. 5307, the county has a population of 200,000 people or greater. As such, public transit providers are required to develop service standards and policies.

Pursuant to FTA circular 4702.1B, RIDE ON has established and monitors service performance under quantitative service standards and qualitative service policies. The standards and policies that must be monitored are:

- Standards
 - Vehicle Load for each mode
 - Vehicle Headway for each mode
 - On-Time Performance for each mode
 - Service Accessibility for each mode
- Policies
 - Vehicle Assignment for each mode
 - Distribution of Transit Amenities (Policy and Standards) for each mode

2.2. *Ride On Service Standards*

Standards for each of the FTA requirements are described below:

Vehicle Load Factor - This standard is measured as the ratio of passengers on board to the seated bus capacity expressed as a percent. Values of 100 percent or less indicate all riders are provided a seated ride while values of more than 100 percent denote standees. Loading standards indicate the degree of crowding (i.e., standees) which is acceptable, with consideration given to both the type of service and the operating period. Acceptable load factors are as follows:

Service Type	Load Factor
Regular Routes	1.2
Express	1.0

Vehicle Headways - In general, frequencies or "headways" (the time between one bus and the next at the same location in the same direction) are established to provide enough vehicles past the maximum load point(s) on a route to accommodate the passenger volume and stay within the recommended load factor standards. If passenger loads are so light that an excessive time is needed between vehicles to meet loading standards, then headways should be set on the basis of policy



considerations. Montgomery County has established a thirty minute headway as the minimum policy headway for routes operating in any time period.

As with all standards, the minimum headway is not an absolute measure and should be used as a guide. There may be situations where low demand and actual running times warrants even less frequent service. Further, headways should be designed, wherever possible, to conform to regularly recurring clock face intervals. There are instances where operational efficiencies may take the place of the benefits of clock face headways.

On-Time Performance – on-time performance standards have been established as follows:

Schedule Adherence (OTP):	All Service Types
2 minutes early to 7 minutes late	88.5%

Service Accessibility – Within Montgomery County transit service is provided to traffic analysis zones with 3+ households per acre and/or 4+ jobs per acre.

2.3. Ride On Service Policies

Vehicle Assignment Policy – Ride On transit vehicles are assigned to three garages based upon their size and technology. The Nicholson Court Garage located near White Flint is a leased facility and can only accommodate diesel buses 30 foot in length or shorter. The Silver Spring Garage located near downtown Silver Spring can only accommodate diesel fueled buses. The David F. Bone Equipment Maintenance and Transit Operations Center (EMTOC) located in Gaithersburg can accommodate diesel and CNG buses up to 60 foot in length. Vehicles are assigned to routes based upon ridership loads with smaller buses assigned to routes with lighter loads and full-sized buses assigned to routes with heavier loads. Ride On monitors the age of buses assigned to routes by periodically sampling the bus assignments for a weekday and then comparing the average age of the buses assigned by quartile to the average age for all buses assigned. If the average age of buses assigned to any quartile is one standard deviation higher than the average of all buses assigned, then further investigation of the bus assignment process will be conducted.

Distribution of Transit Amenities Policy - In accordance with Ride On policy Bus Stop/Passenger Facilities will generally be located at or near major trip generators or destinations or at regular intervals based on the population density and transit-related demographic factors along the route. Stops must be in locations passengers can board and alight safely and where buses can safely enter and exit. Wherever possible, mid-block crossings are avoided to minimize potential pedestrian and vehicular conflicts. Optimally, bus stop locations will have pedestrian friendly facilities, including sidewalks and walkways that separate pedestrians from vehicular traffic. Whenever possible, stops in opposite directions on a route will be located directly opposite each other.

All stops will be fixed locations designated by Ride On in accordance with this policy. Additionally, Ride On has a Night Request Stop program that allows passengers to request to be let off at any location with the following limitations: after 9:00 p.m. only; alighting only; must be on the regular route; location must be safe to stop; in Maryland only.



Bus stops shall not obstruct driveways or entranceways or cause visual obstructions for motorists or for bus operators merging back into the traffic stream. In areas that have high traffic volumes, turning movements, and pedestrian crossings through intersections, the stop should be placed where it presents the least conflict with vehicular traffic and pedestrians.

Decisions for final bus stop selection are based on the following:

- Passenger origins
- Adjacent land use and activities
- Operational feasibility in accessing the stop
- Physical constraints or obstructions (trees, driveways, etc.)
- Pedestrian access including accessibility for people with disabilities
- Parking restrictions and requirements
- Traffic volumes on adjacent roadways particularly as evidenced by turning movements
- An examination of the individual bus route/routes that serve the potential stop
- Bus and intermodal (rail, park and ride) transfers to the stop

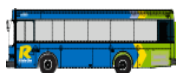
Safety is a critical consideration. Stops shall not be placed where they present a hazard to passengers, transit vehicles, or other traffic.

Park and Ride lots are a special category of bus stops intended to extend the reach of transit by collecting passengers from a wider area. Their location is based on availability of land or preexisting parking and connections to the regional highway system. Park and rides may also accommodate carpoolers, bicycle riders and serve as transit hubs. Planning and development of park and rides include a higher level of involvement with the public, other MCDOT divisions, Maryland National Capital Park and Planning Commission, WMATA and Maryland Transit Administration.

Bus stop interval spacing has a major impact on transit operations. It greatly impacts a route's travel time, service reliability, and schedule adherence as well as the route's attractiveness to the customer population. Ride On guidelines for bus stop spacing are based on a combination of factors including:

- Type of service operated
- Ridership levels
- Passenger transfer potential and demand
- Type of roadway used for operation
- Prevailing traffic conditions operating on the roadway
- Adjacent and surrounding land use, trip generators, or attractors
- Topography of the area
- Population densities and demographic characteristics
- Interface with other routes and public transportation services

Bus stops should be placed approximately 750 feet to 1000 feet apart or 5-7 bus stops per mile dependent on potential commuter density.



1. Exceptions to Interval Spacing Requirements: Interval spacing guideline exceptions should be limited and made on a case-by-case basis in order to not confuse customers or adversely impact a route's running time and schedule adherence. The following are examples of exceptions to interval spacing requirements:
 - Street or subdivision design causes walking distance to the stop to be excessive
 - Topographic conditions, such as hills or steep grades leading to and from a bus stop
 - Demographic characteristics of customers, such as elderly customers who are unable to conveniently travel the prescribed guideline distance between bus stops
 - High volume activity centers.
2. Consolidation of Bus Stops: Where there are excessive numbers of stops located at short intervals, stops with low levels of ridership will be consolidated. Individual stops may be eliminated or adjacent stops may be consolidated at a suitable intermediate location. Determination of stops to be retained will be based on operational, safety, accessibility, customer convenience considerations and on the suitability of the site for customer facilities.

3. Monitoring Methods

Ride On will produce a Title VI Monitoring Report every three years. The monitoring method for each service standard and policy follow.

3.1. *Minority Population by Bus Route*

Using the 2018 on-board survey, Ride On has identified the minority and majority ridership for each route. Each route's minority and majority ridership will be totaled and a percent minority riders will be calculated. The routes will then be ranked in descending order of minority ridership and divided into four quartiles with the highest minority percentage in the first quartile. Table 3-1 below lists the Ride On routes with minority percentages and arranged in quartiles. This minority ridership ranking by quartile will be utilized in the service monitoring to determine if service is being fairly and equitably provided.

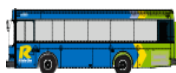


Table 3-1: Ride On – Montgomery County Population by Transit Route

Minority by Route – 2018 Survey			Minority by Route – 2018 Survey		
	Route #	% Minority		Route #	% Minority
Quartile 1	73	92.5%	Quartile 3	12	69.0%
	21	87.3%		5	66.1%
	129	87.3%		43	66.0%
	39	87.3%		44	65.6%
	97	87.2%		33	65.1%
	20	85.9%		49	64.7%
	98	85.3%		23	64.5%
	67	85.0%		34	63.3%
	75	84.6%		14	63.0%
	15	84.2%		1	61.9%
	17	84.1%		301	60.7%
	78	84.0%		79	60.0%
	16	82.9%		90	59.4%
	64	82.9%		81	58.9%
	83	82.9%		37	58.8%
	41	82.8%		25	58.6%
	31	82.7%		11	57.7%
	58	81.1%		63	56.4%
	51	81.0%		47	56.2%
	2	80.8%		70	55.0%
Quartile 2	26	79.6%	Quartile 4	4	54.4%
	57	78.2%		6	53.9%
	74	77.7%		13	53.7%
	48	77.4%		52	53.7%
	18	76.1%		96	52.9%
	8	76.0%		76	50.4%
	9	75.8%		42	49.5%
	56	75.4%		71	47.4%
	10	75.1%		22	47.1%
	55	75.1%		7	46.5%
	38	74.6%		60	43.1%
	46	74.3%		24	42.2%
	61	73.9%		65	42.2%
	100	73.7%		53	40.7%
	28	72.6%		32	39.4%
	66	72.5%		29	37.0%
	45	71.8%		30	36.4%
	101	71.7%		36	35.5%
	54	71.3%		19	20.0%
	59	71.3%			



3.2. Vehicle Load Factor Monitoring Method

Using the GFI Fare collection data for a recent fiscal year, ridership and service capacity data will be collected for each route and an average week day AM peak period and PM peak period will be calculated. Using the quartiles shown in Table 3-1, the average load factor per quartile for each peak period will be calculated. A disparity will exist if the average load factor for either quartile 1 or 2 is one standard deviation higher than the system average.

3.3. Route Headways Monitoring Method

Using published timetables, headway data will be collected for each route by four time periods. Using the quartiles shown in Table 3-1, the average headway will be calculated for each quartile and time period. A disparity will exist if the average headway for either quartile 1 or 2 is one standard deviation longer than the system average.

3.4. On-Time Performance Monitoring Method

Using automatic vehicle location data for a recent fiscal year, on-time performance will be collected for each route. Using the quartiles shown in Table 3-1, the average on-time performance will be calculated for each quartile and time period. A disparity will exist if the average on-time performance for either quartile 1 or 2 is one standard deviation less than the system average.

3.5. Service Accessibility Monitoring Method

Using the most recent US Census and GIS analysis Ride On will estimate the percentage of the minority and majority population within ¼ mile of a transit route. If a transit route travels within ¼ mile of a block group, the minority and majority population from that census block group will be assumed to have accessibility to transit services. The average minority and majority access to transit for the system will be calculated. If the minority rate of transit service access is less than 90% of the average rate of transit service access for the total population a disparity will exist.

3.6. Vehicle Assignment Monitoring Method

Using vehicle assignments for a recent weekday, the average age of all buses operating on a route during that weekday will be calculated. Using the quartiles shown in Table 3-1, the average age will be calculated for each quartile. A disparity will exist if the average bus age for either quartile 1 or 2 is one standard deviation older than the system average for all buses assigned.

3.7. Distribution of Transit Amenities Monitoring Method

Transit amenities will be mapped on GIS mapping for minority and low-income populations and the number of shelters and benches will be counted in each area. The number of shelters and the number of benches will be calculated for the minority / non-minority areas and the low-income areas based upon the percent of households in poverty. Rates of shelters and benches per 1,000 households will be calculated. If the rate of shelters or benches in minority / low income areas is 20 per cent less than in non-minority / non-low-income areas a disparity will exist.



4. Monitoring Results

4.1. Vehicle Load Factor Monitoring Results

Ridership and service capacity data was collected for Fiscal Year 2018. Average weekday AM peak period and PM peak period load factors by quartiles are shown in Table 4.1.

Table 4-1: Ride On Vehicle Load Factor Monitoring Results – Fiscal Year 2018

Quartile	AM Peak	PM Peak
1	37.4%	39.0%
2	49.9%	71.2%
3	36.5%	44.3%
4	35.4%	28.3%
System Average	39.9%	45.8%
Standard Deviation	17.6%	26.5%
Disparity Limit	57.2%	72.3%

The monitoring methodology establishes that a disparity exists if the average load factor for either quartile 1 or 2 is one standard deviation higher than the system average. In the AM Peak and PM Peak, the load factor for quartiles 1 and 2 are higher than the system average but lower than the disparity limit. Route 55 with a PM peak load factor of 151% is the only route in this analysis that exceed Ride On's load factor standard. Beginning October 2, 2017, Ride On started the new Route 101 – Ride On extRa which will add additional capacity between Lakeforest, Shady Grove, Rockville and Bethesda. This new route has reduced overcrowding on Route 55.

4.2. Route Headways Monitoring Results

Using the Fiscal Year 2020 Service Summary, headway data was collected for each route by four time periods. The average headway was calculated for each quartile and time period as shown in Table 4-2 below. A disparity exists if the average headway for either quartile 1 or 2 is one standard deviation longer than the system average.

Table 4-2: Ride On Route Headways Monitoring Results – Fiscal Year 2020

Quartile	AM Peak	Mid Day	PM Peak	Evening
1	23.4	26.7	23.9	28.3
2	21.6	25.8	21.1	29.1
3	26.2	34.2	26.5	30.0
4	27.3	30.0	27.8	35.0
System Average	24.6	28.7	24.7	29.4
Standard Deviation	10.5	10.3	10.3	3.7
Disparity Limit	35.0	39.0	35.0	33.0

Analysis of the headways indicates that there are no disparities.



4.3. On-Time Performance Monitoring Results

Using the automatic vehicle location system for Fiscal Year 2019, on-time performance data for all time points was collected for each route using a one-minute early to 4 minutes late. This standard was selected rather than the adopted standard of 2-minutes early to 7 minutes late to better show individual route variation.

The average on-time performance was calculated for each quartile and summarized in Table 4-3. The monitoring methodology provides that a disparity exists when the average on-time performance for either quartile 1 or 2 is one standard deviation less than the system average.

Table 4-3: Ride On On-Time Performance – Fiscal Year 2017

Quartile	On-Time Performance
1	69.8%
2	72.1%
3	71.4%
4	74.1%
System Average	71.9%
Standard Deviation	7.9%
Disparity Limit	64.0%

The on-time performance results using the 2 minutes early to 7 minutes late was FY18 88.2%, FY19 87.5% and FY20 (pre covid-19) 86.4% indicating that overall on-time performance has achieved the system goal of 88.5%.

Evaluating the route by route performance using the 1 minute early to 4 minutes late standard shows five routes (129, 19, 11, 21 and 16) with less than 60% on-time performance. Route 129 is a new limited stop route in the highly congested US29 corridor. Route 21 also operates in the US29 corridor while routes 19, 11 and 16 operate in the vicinity of the Purple Line LRT construction.

4.4. Service Accessibility Monitoring Results

Table 4-4 presents the GIS analysis using the 2018 American Community Survey of the percentage of minority and non-minority populations within ¼ mile of a Ride On and Metrobus transit routes. The monitoring methodology provides that a disparity exists if the minority rate of transit service access is less than 90% of the majority population rate of transit service access. The data for this calculation is shown in Table 4-9 below.

Table 4-4: Ride On Service Accessibility Analysis – July 2020

	Total Population	Minority Population	Non-Minority Population
Montgomery County	1,040,133	480,206	559,927
Transit Service Area	933,013	436,683	496,330
% of population within transit service area	89.7%	90.9%	88.6%

Review of the data indicates that no disparity exists.



4.5. Vehicle Assignment Monitoring Results

Using vehicle assignments for February 5, 2020, the average age of all buses operating on a route was calculated and the average age was calculated for each quartile. The monitoring methodology requires that a disparity exists if the average bus age for either quartile 1 or 2 is one standard deviation older than the system average for all buses assigned.

Table 4-5: Bus Average Age February 5, 2020

Quartile	Average Age
1	6.43
2	5.51
3	6.43
4	6.27
System Average	6.14
Standard Deviation	1.75
Disparity Limit	7.90

Review of the data indicates that the average age of buses assigned to quartile 1 and quartile 2 are slightly younger than the system average. The analysis demonstrates that no disparity exists.

4.6. Distribution of Transit Amenities Monitoring Results

The location of transit amenities has been analyzed using the 2018 American Community Survey five-year estimate to determine if they have been fairly located for minority and low-income populations. Note that the 2014 and 2017 Monitoring reports used the 2010 U. S. Census and there has been some change in the minority population especially for immigrant communities. Tables 4-6 and 4-7 compare the rate of transit amenities calculated as shelters and / or benches per 1,000 people.

The rate of bus shelters per 1,000 people is higher for high minority concentrations while the rate of benches per 1,000 people is almost the same between low minority and high minority concentrations. Considering this data, there does not appear to be any disparity in the location of transit amenities.

Table 4-6: Transit Amenities Relative to Minority Concentrations

Minority Census Block Groups	People	Shelters	Benches	Shelters per 1,000 People	Benches per 1,000 People
Low Minority concentrations less than 43.8%	444,028	279	581	0.63	1.31
High Minority Concentrations more than 43.8%	596,105	533	774	0.89	1.30
County Total	1,040,133	812	1,355	0.78	1.30



Table 4-7: Transit Amenities Relative to Low-income Concentrations

Percent of Households less than Poverty Level	Households	Shelters	Benches	Shelters per 1,000 Households	Benches per 1,000 Households
0-5%	226,690	381	743	1.68	3.28
5.1-10%	97,285	273	407	2.81	4.18
10.1-15%	32,122	116	150	3.61	4.67
15.1-21.3%	14,130	42	55	2.97	3.89
County Total	370,227	812	1,355	2.19	3.66



4.7. Load Factor Detailed Results

Table 4-8: Load Factor Analysis – Fiscal Year 2018

Load Factor		Average Weekday – Fiscal Year 2018					
Q#	Route #	AM Peak Boardings	PM Peak Boardings	AM Peak Seats	PM Peak Seats	AM Load Factor	PM Load Factor
Quartile 1	21	87.3%	112	74	189	162	59.3%
	39	87.3%	114	105	324	297	35.2%
	97	87.2%	136	189	405	324	33.6%
	20	85.9%	690	555	1064	798	64.9%
	98	85.3%	78	67	432	324	18.1%
	67	85.0%	54	38	266	228	20.3%
	75	84.6%	127	119	570	456	22.2%
	15	84.2%	871	542	1672	1178	52.1%
	17	84.1%	164	224	684	608	23.9%
	78	84.0%	172	50	304	228	56.5%
	16	82.9%	572	676	1026	912	55.7%
	64	82.9%	259	259	608	494	42.6%
	83	82.9%	135	113	432	324	31.3%
	41	82.8%	153	187	570	456	26.9%
	31	82.7%	63	48	270	297	23.2%
	58	81.1%	312	298	608	532	51.3%
	51	81.0%	114	72	456	456	25.1%
	2	80.8%	214	201	684	570	31.3%
Quartile 2	26	79.6%	606	669	798	646	75.9%
	57	78.2%	276	490	798	608	34.6%
	74	77.7%	225	320	570	456	39.4%
	48	77.4%	333	497	684	608	48.7%
	18	76.1%	149	92	297	297	50.1%
	8	76.0%	158	202	351	324	44.9%
	9	75.8%	238	275	722	532	33.0%
	56	75.4%	407	384	760	570	53.6%
	10	75.1%	415	550	608	494	68.3%
	55	75.1%	1078	1496	1178	988	91.5%
	38	74.6%	154	231	722	494	21.4%
	46	74.3%	459	743	836	798	54.9%
	61	73.9%	508	442	760	570	66.9%
	100	73.7%	642	496	2014	1596	31.9%
	28	72.6%	61	188	216	324	28.2%
	66	72.5%	57	88	266	228	21.6%
	45	71.8%	259	225	675	486	38.4%
	54	71.3%	403	353	722	532	55.8%
	59	71.3%	848	603	950	722	89.2%



Load Factor		Average Weekday – Fiscal Year 2017					
Q#	Route #	AM Peak Boardings	PM Peak Boardings	AM Peak Seats	PM Peak Seats	AM Load Factor	PM Load Factor
Quartile 3	12	69.0%	256	325	836	760	30.7%
	5	66.1%	427	476	988	722	43.2%
	43	66.0%	132	224	798	532	16.5%
	44	65.6%	55	60	270	324	20.3%
	33	65.1%	97	127	608	532	15.9%
	49	64.7%	557	348	798	646	69.8%
	23	64.5%	153	151	570	456	26.9%
	34	63.3%	574	711	912	684	62.9%
	14	63.0%	173	253	570	456	30.3%
	1	61.9%	317	266	646	494	49.0%
	79	60.0%	199	65	304	228	65.3%
	90	59.4%	221	205	760	608	29.1%
	81	58.9%	60	63	324	324	18.7%
	37	58.8%	93	76	456	418	20.4%
	25	58.6%	215	144	594	405	36.2%
	11	57.7%	281	282	570	418	49.3%
	63	56.4%	132	213	494	456	26.8%
	47	56.2%	351	334	646	494	54.4%
	70	55.0%	296	243	1026	760	28.9%
Quartile 4	4	54.4%	81	87	297	324	27.4%
	6	53.9%	50	53	324	324	15.4%
	13	53.7%	119	79	380	380	31.4%
	52	53.7%	80	34	297	243	27.1%
	96	52.9%	85	161	324	432	26.1%
	76	50.4%	235	241	684	608	34.4%
	42	49.5%	86	96	378	297	22.6%
	71	47.4%	177	81	266	228	66.4%
	22	47.1%	201	174	608	570	33.0%
	7	46.5%	41	24	162	162	25.5%
	60	43.1%	179	108	304	228	58.9%
	24	42.2%	175	49	304	228	57.6%
	65	42.2%	82	40	228	228	36.1%
	53	40.7%	116	79	378	297	30.7%
	32	39.4%	102	92	270	324	37.7%
	29	37.0%	142	180	351	324	40.4%
	30	36.4%	133	191	494	456	26.9%
	36	35.5%	125	102	418	456	29.9%
	19	20.0%	86	21	190	228	45.1%
System Average						39.9%	45.8%
Standard Deviation						17.6%	26.5%
Disparity Limit						57.5%	72.3%



4.8. Route Headways Detailed Results

The purpose of this evaluation is to determine if the routes that provide service to the minority quartiles (1 and 2) have significantly less frequent service (longer headways) than the routes that provide service to the non-minority quartiles (3 and 4). The average headway was taken from the Fiscal Year 2020 service summary. The detailed results are shown on Table 4-9 on the next two pages.

Table 4-9: Route Headway Detailed Results

Quartile	% Minority	Route	Route Description	AM Avg Hdwy	Base Day 1200n	PM Avg Hdwy	Evng 900p
1	92.5%	73	Clarksburg-Old Baltimore-Shady Grove	25		25	
	87.3%	21	Briggs Chaney-Tamarack-Dumont Oaks-Silver Spring	30		30	
	87.3%	39	Briggs Chaney-Glenmont	30		30	
	87.3%	129	Limited Stop US29 Burtonsville-Silver Spring	15		15	
	87.2%	97	GTC, Germantown MARC, Waring Station, GTC	15	30	15	30
	85.9%	20	Hillandale-Northwest Park-Silver Spring	10	20	12	20
	85.3%	98	GTC, Kingsview, GCC, Cinnamon Woods	30	30	30	30
	85.0%	67	Traville TC-North Potomac-Shady Grove	30		30	
	84.6%	75	Clarksburg-Correctional Facility-Milestone-GTC	30	30	30	30
	84.2%	15	Langley Park-Wayne Ave.-Silver Spring	6	15	8	20
	84.1%	17	Langley Park-Maple Ave.-Silver Spring	20	25	20	30
	84.0%	78	Kingsview-Richter Farm-Shady Grove	30		30	
	82.9%	16	Takoma-Langley Park-Silver Spring	12	20	12	30
	82.9%	64	Montgomery Village-Quail Valley-Emory Grove-Shady Grove	20	30	25	30
	82.9%	83	Germantown MARC-GTC-Waters Landing-Milestone-Holy Cross	30	30	30	30
	82.8%	41	Aspen Hill-Weller Rd.-Glenmont	30	30	30	30
	82.7%	31	Glenmont-Kemp Mill Rd.-Wheaton	30		30	
	81.1%	58	Lakeforest-Montgomery Village-East Village-Shady Grove, Watkins Mill & MD355	25	30	25	30
	81.0%	51	Norbeck P&R-Hewitt Ave.-Glenmont	30		30	
	80.8%	2	Lyttonsville-Silver Spring	20	30	20	30
2	79.6%	26	Glenmont-Aspen Hill-Twinbrook-Montgomery Mall	20	30	20	30
	78.2%	57	Lakeforest-Washington Grove-Shady Grove	20	20	20	30
	77.7%	74	GTC-Great Seneca Hwy.-Shady Grove	30	30	30	30
	77.4%	48	Wheaton-Bauer Dr.-Rockville	25	25	20	30
	76.1%	18	Langley Park-Takoma-Silver Spring	30	30	30	30
	76.0%	8	Wheaton-Forest Glen-Silver Spring	30	30	30	
	75.8%	9	Wheaton-Four Corners-Silver Spring	20	30	20	30
	75.4%	56	Lakeforest-Quince Orchard-Shady Grove Hospital-Rockville	25	30	25	30
	75.1%	10	Twinbrook-Glenmont-White Oak-Hillandale	30	30	25	30
	75.1%	55	GTC-Milestone-MC,G-Lakeforest-Shady Grove-MC,R-Rockville	15	15	15	30
	74.6%	38	Wheaton-White Flint	30	30	30	30
	74.3%	46	Montgomery College-Rockville Pike-Medical Center	20	15	15	30
	73.9%	61	GTC-Lakeforest-Shady Grove	20	30	20	30
	73.7%	100	GTC-Shady Grove	6	15	6	30
	72.6%	28	Silver Spring Downtown (VanGo)	15	15	20	15
	72.5%	66	Shady Grove-Piccard Drive-Shady Grove Hospital-Traville TC	30		30	
	71.8%	45	Fallsgrove-Rockville Senior Center-Rockville-Twinbrook	15	30	15	
	71.7%	101	EXTRA-Lakeforest-Medical Center	10		10	
	71.3%	54	Lakeforest-Washingtonian Blvd-Rockville	20	30	20	30
	71.3%	59	Montgomery Village-Lakeforest-Shady Grove-Rockville	20	30	20	30



Table 4-10: Ride On Headway Analysis

Quartile	% Minority	Route	Route Description	AM Avg Hdwy	Base Day 1200n	PM Avg Hdwy	Evng 900p
3	69.0%	12	Takoma-Flower Avenue-Wayne Avenue-Silver Spring	15	30	15	30
	66.1%	5	Twinbrook-Kensington-Silver Spring	12	30	12	30
	66.0%	43	Traville TC-Shady Grove-Hospital-Shady Grove	25	30	30	30
	65.6%	44	Twinbrook-Hungerford-Rockville	30		30	
	65.1%	33	Glenmont-Kensington-Medical Center	25		25	
	64.7%	49	Glenmont-Layhill-Rockville	20	30	20	30
	64.5%	23	Sibley Hospital-Brookmont-Sangamore Road-Friendship Heights	25	30	30	30
	63.3%	34	Aspen Hill-Wheaton-Bethesda-Friendship Heights	15	30	15	30
	63.0%	14	Takoma-Piney Branch Road-Franklin Ave.-Silver Spring	30	30	30	
	61.9%	1	Silver Spring-Leland St.-Friendship Heights	30	20	20	30
	60.7%	301	Tobytown-Rockville	90	90	90	
	60.0%	79	Clarksburg-Skylark-Scenery-Shady Grove	30		30	
	59.4%	90	Milestone-Damascus-Woodfield Rd- Airpark Shady Grove	25	30	20	30
	58.9%	81	Rockville-Tower Oaks-White Flint	30		30	
	58.8%	37	Potomac-Tuckerman La.-Grosvenor-Wheaton	30		30	
	58.6%	25	Langley Park-Washington Adventist Hosp-Maple Ave-Takoma	15		20	
	57.7%	11	Silver Spring-East/West Hwy-Friendship Heights	9		12	
	56.4%	63	Shady Grove-Gaither Road-Piccard Dr.-Rockville	30	30	30	
	56.2%	47	Rockville-Montgomery Mall-Bethesda	25	30	25	30
	55.0%	70	Milestone-Medical Center-Bethesda Express	12		15	
4	54.4%	4	Kensington-Silver Spring	30		30	
	53.9%	6	Grosvenor-Parkside-Montgomery Mall Loop	30	30	30	
	53.7%	13	Takoma-Manchester Rd.-Three Oaks Dr.-Silver Spring	25		27	
	53.7%	52	MGH-Olney-Rockville	30		30	
	52.9%	96	Montgomery Mall-Rock Spring-Grosvenor	13	30	16	
	50.4%	76	Poolesville-Kentlands-Shady Grove	15	30	15	
	49.5%	42	White Flint-Montgomery Mall	30	30	30	
	47.4%	71	Kingsview-Dawson Farm-Shady Grove	30		30	
	47.1%	22	Hillandale-White Oak-FDA-Silver Spring	15		15	
	46.5%	7	Forest Glen-Wheaton	30		30	
	43.1%	60	Montgomery Village-Flower Hill-Shady Grove	30		30	
	42.2%	24	Hillandale-Northwest Park-Takoma	25		30	
	42.2%	65	Montgomery Village-Shady Grove	30		30	
	40.7%	53	Shady Grove-MGH-Olney-Glenmont	35		35	
	39.4%	32	Naval Ship R&D-Cabin John-Bethesda	30		30	
	37.0%	29	Bethesda-Glen Echo-Friendship Heights	30	30	30	40
	36.4%	30	Medical Center-Pooks Hill-Bethesda	30	30	30	30
	35.5%	36	Potomac-Bradley Blvd.-Bethesda	30	30	30	
	20.0%	19	Northwood-Four Corners-Silver Spring	30		30	



4.9. On-Time Performance Detailed Results

Table 4-11: Ride On On-Time Performance – Fiscal Year 2019

Quartile	Route	Route OTP	Quartile OTP	Quartile	Route	Route OTP	Quartile OTP
Quartile 1	73	71.9%	69.8%	Quartile 3	12	73.1%	71.4%
	21	57.3%			5	67.4%	
	39	74.3%			43	78.2%	
	129	42.7%			44	86.5%	
	97	75.7%			33	72.9%	
	20	62.4%			49	77.4%	
	98	71.5%			23	63.7%	
	67	79.8%			34	69.5%	
	75	79.3%			14	64.3%	
	15	74.2%			1	73.9%	
	17	64.1%			301	71.7%	
	78	69.9%			79	63.7%	
	16	57.4%			90	67.6%	
	64	74.5%			81	73.2%	
	83	73.1%			37	75.7%	
	41	77.1%			25	83.8%	
	31	73.1%			11	54.9%	
	58	75.4%			63	78.5%	
	51	79.3%			47	65.8%	
	2	68.4%			70	66.0%	
Quartile 2	26	64.2%	72.1%	Quartile 4	4	73.6%	74.1%
	57	70.5%			6	82.9%	
	74	76.6%			13	65.7%	
	48	80.0%			52	69.1%	
	18	71.9%			96	73.8%	
	8	66.3%			76	76.9%	
	9	61.4%			42	81.0%	
	56	71.0%			71	70.6%	
	10	65.1%			22	68.9%	
	55	64.2%			7	83.7%	
	38	74.5%			60	89.3%	
	46	70.5%			24	76.9%	
	61	70.8%			65	72.1%	
	100	87.0%			53	74.0%	
	28	73.0%			32	70.7%	
	66	84.0%			29	73.5%	
	45	79.3%			30	80.8%	
	101	67.6%			36	71.3%	
	54	68.7%			19	53.9%	
	59	74.6%					



4.10. Service Accessibility Detailed Results

Using the 2018 American Community Survey and the methodology described in Section 3.5, Ride On has utilized GIS to estimate the numbers of persons in Montgomery County that are within the transit service area for the Ride On and Metrobus services. Table 4.11 below provides the numerical analysis. Figure 5-1 illustrates the minority populations served by the Ride On transit services and Figure 5-2 illustrates the low-income populations served by the Ride On transit services.

Table 4-12: Ride On Service Accessibility Analysis – July 2020

	Total Population	Minority Population	Non-Minority Population
Montgomery County	1,040,133	480,206	559,927
Transit Service Area	933,013	436,683	496,330
% of population within transit service area	89.7%	90.9%	88.6%

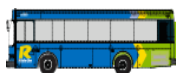


Figure 4-1: Ride On Service Area with Minority Population Concentrations by Block Group

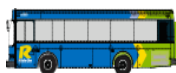
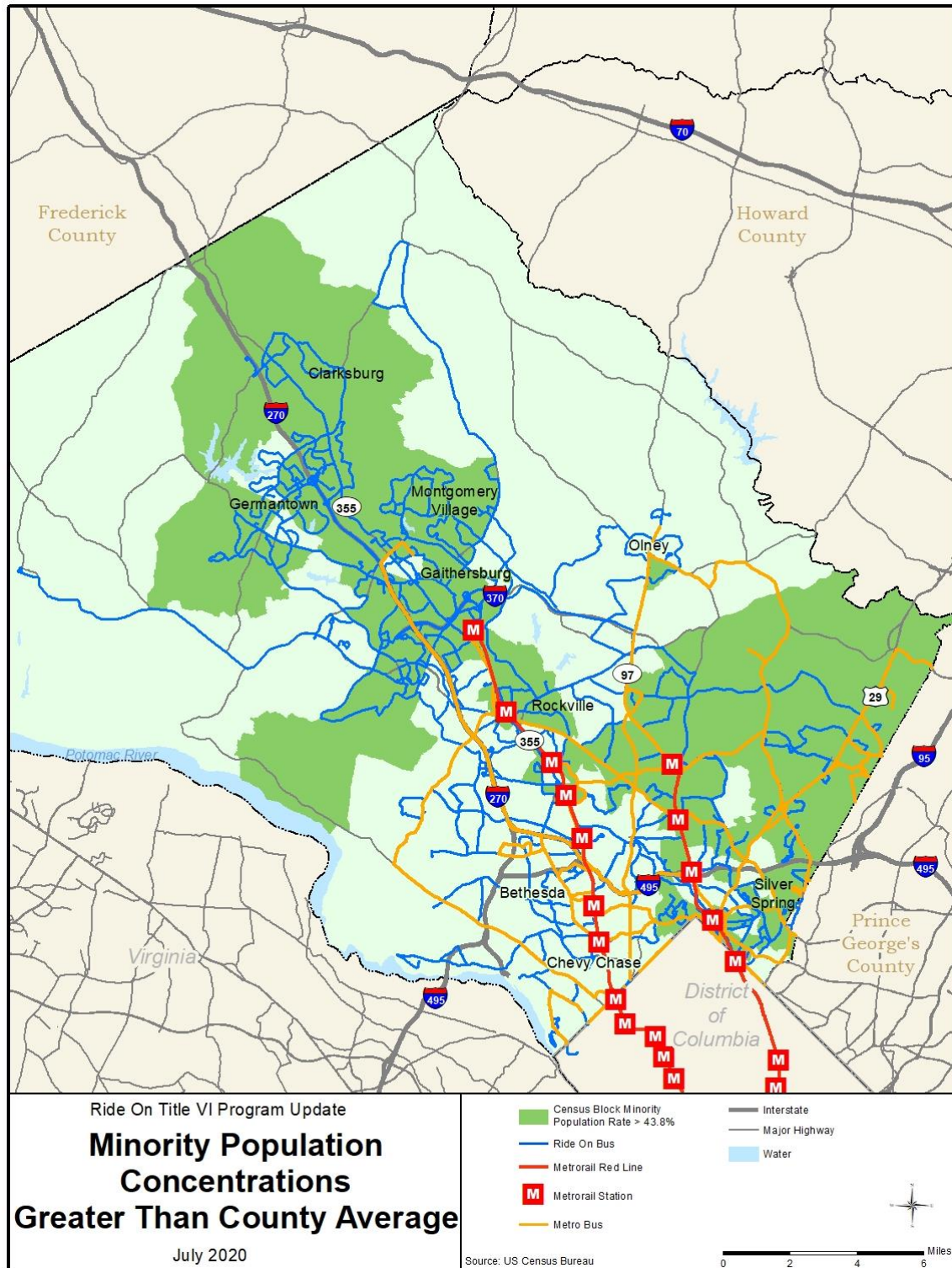
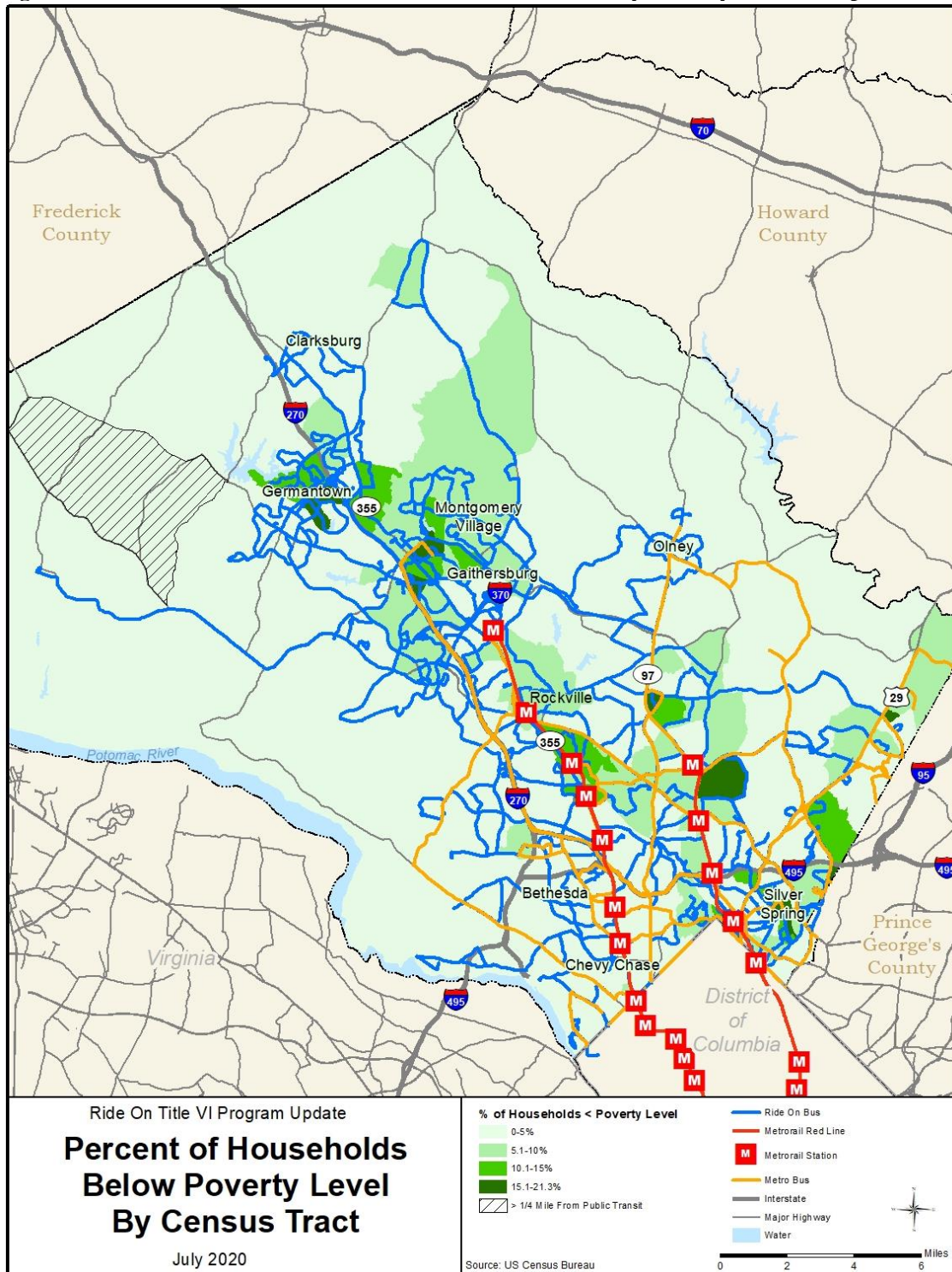


Figure 4-2: Ride On Service Area with Households below Poverty Level by Block Group



4.11. Vehicle Assignment Detailed Results

Table 4-13: Ride On Average Bus Age by Route – February 5, 2020

Quartile	Route	Trips	Total Age	Route Average Age	Quartile Average Age
Quartile 1	73	37	170	4.6	6.43
	21	15	69	4.6	
	39	33	205	6.2	
	97	53	372	7.0	
	20	124	883	7.1	
	98	62	485	7.8	
	67	15	83	5.5	
	75	68	490	7.2	
	15	167	1154	6.9	
	17	82	572	7.0	
	78	16	82	5.1	
	16	122	851	7.0	
	64	73	276	3.8	
	83	78	640	8.2	
	41	69	466	6.8	
	31	22	160	7.3	
	58	71	347	4.9	
	51	28	225	8.0	
	2	78	563	7.2	
	26	87	550	6.3	
Quartile 2	57	98	395	4.0	5.51
	74	68	300	4.4	
	48	89	572	6.4	
	18	66	320	4.8	
	8	57	449	7.9	
	9	81	626	7.7	
	56	75	331	4.4	
	10	71	526	7.4	
	55	127	588	4.6	
	38	68	546	8.0	
	46	116	446	3.8	
	61	83	409	4.9	
	100	178	756	4.2	
	28	74	479	6.5	
	66	14	72	5.2	
	45	77	641	8.3	
	101	106	225	2.1	
	54	81	337	4.2	
	59	93	445	4.8	



Quartile	Route	Trips	Total Age	Route Ave Age	Quartile Ave Age
Quartile 3	12	105	699	6.7	6.43
	5	93	701	7.5	
	43	74	403	5.4	
	44	25	184	7.4	
	33	37	244	6.6	
	49	90	600	6.7	
	23	66	439	6.7	
	34	94	679	7.2	
	14	64	472	7.4	
	1	80	550	6.9	
	301	0	0		
	79	18	101	5.6	
	90	69	331	4.8	
	81	31	284	9.2	
	37	27	214	7.9	
	25	49	404	8.2	
	11	37	237	6.4	
	63	57	213	3.7	
	47	72	511	7.1	
	70	60	47	0.8	
Quartile 4	4	37	271	7.3	6.27
	6	58	473	8.2	
	13	22	167	7.6	
	52	22	59	2.7	
	96	54	418	7.7	
	76	68	317	4.7	
	42	59	477	8.1	
	71	16	76	4.8	
	22	37	178	4.8	
	7	12	70	5.9	
	60	17	47	2.8	
	24	17	107	6.3	
	65	14	28	2.0	
	53	31	256	8.2	
	32	28	247	8.8	
	29	64	509	7.9	
	30	64	478	7.5	
	36	54	373	6.9	
	19	14	99	7.1	



4.12. Distribution of Transit Amenities

Transit amenities are mapped on Figures 4.3 and 4.4.

Figure 4-3: Ride On Stop Amenities Relative to Minority Population

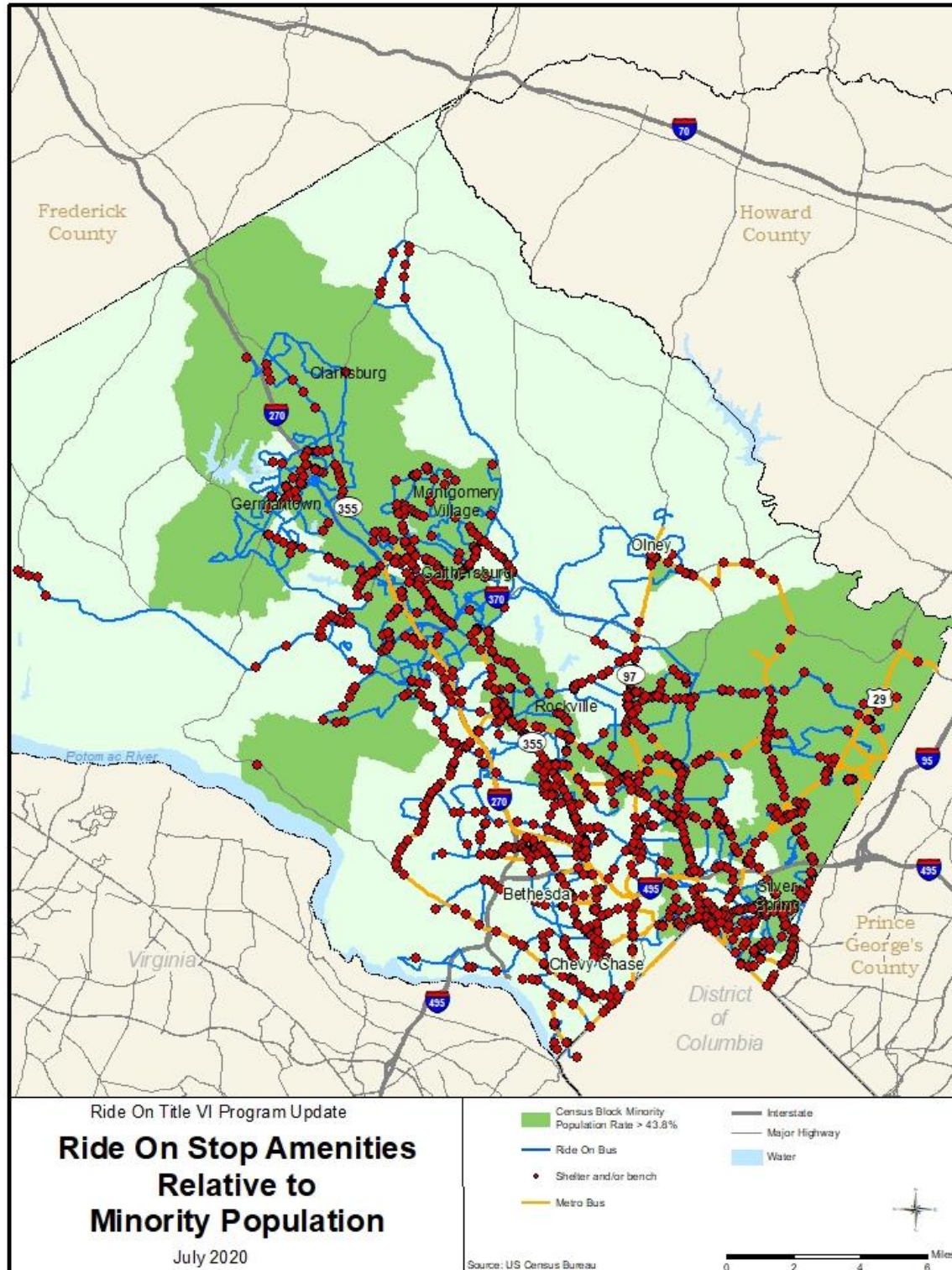


Figure 4-4: Ride On Stop Amenities Relative to Poverty Level Income

